

Recher
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Zululand.
South Africa.
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I.U.C.N. CROCODILE SPECIALISTS GROUP: NEWSLETTER NO. 6.

1. CUBA.

Mr. Luis Varona informs us that of the two species Crocodylus rhombifer and C. acutus, C. rhombifer is very much an endangered species in this country. Formerly its range was apparently limited to Zapata swamp in south central Cuba and Lanior swamp on nearby Isle of Pines. Almost the whole population from these two swamps were captured about ten years ago, and brought to corrals built near Treasure Lake in Zapata swamp. The idea was to safeguard the population from agricultural and drainage works.

The same was done with populations of C. acutus but owing to its much greater distribution along the coast of Cuba and in many of the surrounding islands and keys, there are still reasonable sized individuals to be seen in the wild state. Although protected by law, these animals are slaughtered for meat and hides and are declining rapidly.

In the official corrals, of Zapata Swamp, both species were put together, about 18,000 individuals of all sizes and ages. (Figures quoted by local newspapers and magazines), without thought to individual territory or natural habitat. In the wild state, C. rhombifer is a freshwater species, and C. acutus inhabits brackwater zones and is in fact very tolerant to salt water. Under these artificial conditions, the species are inter breeding. In past years there were apparently controlled interbreeding as well as artificial hatching experiments. These were abandoned due mainly to high juvenile mortality. It was also practise to cull large individuals from time to time.

Today the corrals cannot be considered as a refuge or sanctuary for the crocodiles, there appears to be no management policy and in the opinion of Luis Varona, both species are on the way to extinction from a combination of interbreeding, high mortality of young and through overcrowding in a poor habitat. The animals are housed almost solely for tourists it seems and advice he has proffered for better management has been ignored.

2. SOUTH AMERICA.

From 113th Report of the Zoological Gardens of Frankfurt for the year 1971. (p. 38)

"The Black Caiman (Melanosuchus niger) is one of the most endangered species of crocodile, all of whom are threatened, due to the demand from the fashion industry. Because little is known about the life of this reptile a research project

is required at this time to gain the necessary data on which the requisites for effective protection can be based. We paid out from the fund the sum of 17,721,72 DM for the W.W.F. Project no. 579. This research project will be carried out by Dr. Kai-Chr. Otte in the Manu National Park, Peru.

3. Newsletter 5, contained an item about a tannery in Asuncion. I asked Prof. Grzimek for details and his reply is as follows:-

Dear Mr. Pooley,

We have now received an answer from the Farbwerke Hoechst with respect to the tannery Curtiembre Concordia in Asuncion. It reads as follows:

"Our collaborator, Mr. Fuchs, has worked from autumn 1968 till the end of 1969 for the tannery Curtiembre Concordia in Paraguay as adviser for technical problems in the use of tannery equipment.

The firm has gone bankrupt in the meantime and the work has been discontinued.

Hoechst has taken over the property of the company to cover existing claims. The machine units of this company have been sold to other firms.

Since we have no use at present for the empty houses we are in negotiations with various firms, however, of which none is - as far as we are informed - interested in the manufacturing of reptile skins".

Yours sincerely,

(Prof. Dr. Dr. Grzimek)

4. ECUADOR.

Note by Rene Honegger.... "While in Ecuador with a group of 12 Swiss tourists, I was not able to see any crocodilians either in the wild, nor sold as live specimens. The small zoos in Quito and Banos had none in their collections. I was told by our reliable guide that there are none in the upper part of river Napo, a tributary to the Amazone rivers. -At Guayaquil airport I saw several handbags made out of caiman skins, this was the only moment I saw any crocodile, or reptile souvenirs at all in Ecuador."

5. AUSTRALIA.

To all members and consultants, Crocodile Specialist Group, from H.R. Bustard (Secretary.)

Could you please put Mr. Joe Bredl (postal address: Edward River, Australia 4871) on your reprint mailing list and send him your available reprints at your convenience.

Mr. Bredl is in charge of our north Queensland experimental crocodile farm and crocodile research project.

6. WEST GERMANY:

Crocodile Egg-shells required by Prof. Dr. G. Krampitz
Institut für Anatomie und Physiologie der Haustiere,
Lehrbereich Biochemie, Universität Bonn.

"We would be very grateful, if you could supply in with crocodile egg shells during the next breeding season. This material is needed for a scientific study of sell proteins of reptile eggs. Therefore we are also interested in egg shells or fragments of them of other reptiles (also snakes) and birds.

The shells need not to be fresh or prepared in any way.

An acknowledgement will be written for your help after analyzing the samples."

7. MEXICO.

James Powell Jr. reports on a brief field trip to northeastern Mexico.

1. Ciudad Valles San Luis Potosi: crocodiles, presumably the long-snouted northern form of Crocodylus moreletii, still occur sporadically in the rivers and lagoons around Valles, but they are nowhere common enough to be an observable part of the fauna. The proprietor and hunting/fishing guide of the Hotel Taninul, who probably knows the countryside as well as anyone, said the last time he had personally seen a crocodile was six months ago. The animal was about two meters long.

A small population of crocodiles is currently protected by the owner of the "Quinta Emma", a plantation about 20 miles south of Valles on the highway toward Mexico City. The reptiles are in an artificial irrigation lake formed behind a dam. On private property, they are relatively safe from poachers.

2. Ciudad Mante, Tamaulipas: the taxidermist in Mante, who is the principal buyer of hides for this region, had three crocodile hides which had been brought in since my last visit to his shop in February, 1970: a complete mounted specimen eight feet long, allegedly brought in a year ago; a tanned hornback ten feet long, and said to have come in six months ago; and a fresh hornback six feet long which the man said had been killed only two days before. When unrolled for measuring, this last still had fresh blood on its inner side, and was obviously quite new. By default, I will call all three specimens -- including the ten-footer -- C. moreletii. I have commented elsewhere on the difficulties of classifying crocodiles from the northern part of Mexico's Gulf coast as definitely acutus or definitely moreletii.

When I tried to obtain collection data, my informant became suspicious -- and uncommunicative. In Mexico today a surviving crocodile population represents a valuable asset, and asking

its whereabouts is like asking a prospector to show you his gold strike. I could only learn that the area is remote, and needs a four-wheel-drive vehicle and three or four days' time to visit.

So somewhere in southern Tamaulipas there would seem to be a surviving crocodile population capable of producing ten-foot individuals, but where it is only the taxidermist and his partners in crime know, and they aren't talking.

3. Soto la Marina, Tamaulipas: I can now confirm the existence of a crocodilian, probably the northern form of moreletii, in the Soto la Marina River around and upstream from the town of Soto la Marina. Downstream from this point the river rapidly widens into a brackish estuary, and crocodiles are said to become rarer or non-existent. C. lacutus might, of course, occur in these lower reaches, as well as in the saline lagoons around La Pesca; I have not yet visited these areas, and have no direct data.

It seems likely that until quite recently crocodiles ranged up the Soto la Marina and its tributaries to at least the 24th parallel, as older residents with whom I talked could remember that in the 1930's, when the river teemed with the reptiles, great "alligator hunts" often extended upriver to padilla and Abasolo. Later, as the crocs became rarer, hunting dwindled, and does not seem to be practiced in the area to any extent today. Many of the river people with whom I talked did not even know that crocodile skins had a commercial value! God forbid that I should "enlighten" them!

This area is relatively remote, and perhaps for this reason its crocodilian populations may be in better shape than those in more populous regions. While nowhere really common, my preliminary investigations would seem to indicate that there are localized places where the animals are not really rare, either. I plan to return in a few weeks for a more detailed study.

One final note: should Mexico develop its own reptile industry, then the effectiveness of the Mason Act and similar legislation in protecting crocodilians in that country would obviously be lessened. There is some indication this may be happening. Crocodile belly hides are now being made locally into belts, which are sold to tourists along the Pan-American Highway for 100 pesos (\$8.00 U.S.) each. Since a hide of any size will make a lot of belts (and since the rich boys are finding it harder to pick up crocodilian leather products in the United States now), this could be quite lucrative."

8. U.S.A.

James Powell, Jr. came across this list with the truly fantastic prices now being asked, and as he remarks, are these animals now worth these prices because of the Import ban, or because of scarcity of animals in the wild state?

PHILADELPHIA REPTILE EXCHANGE. July/August 1972. 436 Vernon Rd.,
Jenkintown, Pennsylvania 19046, U.S.A.

Albino <i>C. porosus</i> : 24 inches. for a pair.....	\$5000
<i>Crocodylus rhombifer</i> : 5½-6ft. for a pair	\$7000
<i>Crocodylus intermedius</i> : 4ft.	\$3500
<i>Crocodylus johnstoni</i> : 2½ft. for a pair	\$1500
<i>Crocodylus moreletii</i> : 2½ft.	\$300
<i>Crocodylus niloticus</i> : 2-4ft.	\$300
<i>Crocodylus porosus</i> : 28 inches	\$100
<i>Crocodylus acutus</i> : 30 inches	\$125
<i>Crocodylus siamensis</i> : 10 inches	\$100
<i>Tomistoma schlegelli</i> : 2ft.	\$100
<i>Melanosuchus niger</i> : 4½ft.	\$500
<i>Caiman latirostris</i> : 12 inches	\$300
<i>Paleosuchus trigonatus</i> : 3ft.	\$200
<i>Caiman C. fuscus</i> : 30 inches	\$25

9. AFRICA.

Osteolaemus tetraspis in Cameroun. James Powell Jr. reports that he has been granted 600 dollars towards the cost of a field trip to study this species in the field. The grant authorised by the Explorers Club.

10. U.S.A.

Robert Beck, at the Center for Field Biology and Conservation of the New York Zoological Society, is undertaking a comparative study of crocodylian vocalizations. He needs to obtain tape recordings of adult and immature crocodylians of as many species as possible for use in audio-spectrographic analyses, and for play-back to captive animals. Because he cannot hope to record all species himself, he would like to hear from anyone who has or could obtain recordings of crocodylian sounds, and who would be willing to loan them to him, or send copies. He would appreciate any such help, and in any publications would acknowledge all contributions. His address is:
New York Zoological Society,
185th Street & Southern Boulevard
Bronx, New York 10460.

11. EVERGLADES NATIONAL PARK - U.S.A.

Nesting Behaviour Studied with Cameras by John Ogden.

In our efforts to determine the factors which influence nesting success for Crocodylus acutus we felt it imperative to understand the nocturnal behaviour of adult crocodiles at nest mounds during the nesting season. I considered the most sensible way to determine crocodile nesting behaviour is with cameras, therefore our photo project was developed jointly with Mr. Caulion Singletary, a wildlife photographer with considerable knowledge of equipment, etc. We are using two motorized, Nikon 35mm. cameras, equipped with wide angle lens, and located on

tripods approximately 15 - 20 feet from nest mounds. Cameras are activated by mercury switches located in or on nest mounds. Once the cameras are set off by some disturbance to the switches, the film is exposed on a time sequence basis, usually at 30 or 90 second intervals. Each camera contains a 50 foot roll of infrared-sensitive black and white film. Illumination is provided by infrared strobe units, therefore no visible light is produced. We've had a series of small problems with this equipment, due to affects of heat and moisture (in spite of fact that all equipment is weather-proofed), and wiring and battery failures. However, after one summer of operation, we've successfully accumulated some remarkable series of photographs, and have made several surprising discoveries concerning the complexity of crocodile behaviour at nests. We should have some of these photographs published fairly soon.

12. LOUISIANA.

The Louisiana Wild Life and Fisheries Commission today established the dates for a 13 day experimental alligator season to be conducted in a portion of Cameron parish this fall.

In setting the experimental alligator hunting season, the commission emphasized that it would be conducted only in that portion of Cameron parish below the Intracoastal Canal and definitely not be open in any other portion of Louisiana, or on any State or Federal refuges.

The season will extend from September 5 through September 17 and hunting will be allowed only in daylight hours. No "poling" of alligator nests will be allowed, in order to protect the female alligators.

A strict tagging and quota system will be part of the regulations governing the experimental season in that portion of Cameron parish under which the alligator hunting will be allowed. This will prevent any illegal hunting activity during the special season.

Additionally, the commission further emphasized that special instructions will be issued to the alligator hunters immediately prior to the hunting season that will prevent any illegal skins from being marketed that might be taken from alligators in other parts of the state.

Licenses and tags will be issued only to hunters who are authorized by landowners to hunt the allowed number of alligators that can be taken from those tracts of land where hunting will be allowed. This quota will be predicated on the acreage involved and the type of marshland from which the alligators will be taken.

The commission announced that a quota of 4,000 alligators, or approximately eight per cent of the estimated number of alligators present in that portion of Cameron parish below the intracoastal Canal would be taken during the special season.

A further safeguard against any illegal alligator hides being marketed will be provided by validation of each tagged alligator skin at Rockefeller Refuge during the period September 18 - 21. Each skin will be examined and retagged by a Commission biologist.

The commission announced that other measures would be

taken to prevent any illegal skins from being marketed or shipped out of the state in violation of both state and federal laws.

This experimental season was worked out by an advisory committee of Dr. Leslie L. Glasgow and Dr. Robert H. Chabreck both of L.S.U. and John J. Lynch, a former biologist with the U.S. Bureau of Sport Fisheries and Wildlife, in conjunction with biologists of the Louisiana Wild Life and Fisheries Commission.

13. ATLANTA

Breeding Morelet's Crocodiles *Crocodylus moreletii* Atlanta Zoological Park.

In 1972 the Atlanta Zoological Park was again successful in hatching 25 baby Morelet's crocodiles *Crocodylus moreletii* from a captive colony of seven adults. One female laid eggs on May 15 and dug the young out the evening of July 31. However she was unsuccessful in defending the baby crocodiles from a large male and we recovered only 10 of the 25 that hatched from the 32 eggs laid. More eggs are being artificially incubated. We believe our breeding success is linked to our crocodile diet change from fish to whole chickens fortified with Vitamin E.

14. JERSEY - CHANNEL ISLANDS.

The Jersey Wildlife Preservation Trust (headed by Gerald Durrell), Les Augres Manor, Jersey, Channel Islands, have just acquired ten *Crocodylus rhombifer* with which they hope to found a captive breeding colony. Five are already at the Manor, five are being held in Europe (I don't know where) until more facilities can be built. This is probably the largest collection of this species outside of Cuba. I have no information on the sizes or sex ratios of the specimens, nor how they were obtained.

15. ENGLAND.

Extracts from Chester Zoo News and Guide. (August, 1972) (p.13-16) "Perhaps the most exciting news of all is that a Broad-fronted Crocodile (*Osteolaemus tetraspis tetraspis*) has laid eggs. We will not know for about the three months if these are fertile but the fact that she has progressed to laying and is standing guard over the nest so energetically we feel warrants mention.

This female is the only specimen of a Broad fronted crocodile in the collection and is accommodated in a vivarium with two Congo Dwarf Crocodiles (*Osteolaemus tetraspis osborni*) Any offspring must of course be the result of a mating between these two sub-species.

Hopes of breeding these reptiles were first raised last

year when the female scraped a nest of twigs, earth and plant material. Eggs were laid but unfortunately were taken by a Caiman living in the same enclosure at that time. An egg which was rescued, though beyond incubation, looked promising.

With the Caiman removed this year, she scraped another nest and laid more eggs; two of which can be seen lying near the surface of the mound which is about one and a half feet deep at the highest point. As a further aid to incubation, an infra red lamp has been suspended above the nest and it is kept moist by a regular spray of water.

The female does not actually sit on the nest but maintains a constant guard nearby and is extremely aggressive, but the two Congo Dwarf Crocodiles have plenty of room to keep out of her way when necessary.

16. NEW BOOKS, JOURNALS and PAPERS.

Crocodiles by C.A.W. Guggisberg. 1972. 195pp. £2.75.
Wren Publishing Pty. Ltd. \$6.75.

Books about crocodiles are so rare that the appearance of one is a major event. Mr. Guggisberg has written an excellent historical account, which has been well researched, together with compilation of much contemporary, often little-known, information. This is not to say that he does not know crocodiles in the field - he does - but the main importance of the book is for the diverse information he has brought together. 'Crocodiles' deals with all living species and has a good chapter on the evolution of the group.

Members of the Crocodile Group will be delighted at the strong conservation message which pervades the whole book and by the final chapter entitled 'A plea for the Crocodilians'. Dr. Fritz Vollmar has written a Preface. Guggisberg, author of more than twenty books on natural history, has been involved with wild animals and their preservation all his life. Since his retirement from the World Health Organisation, he has devoted himself entirely to wild-life studies, and works in close association with the World Wildlife Fund. Unfortunately you would never know any of this from the book which lacks an Introduction by the author, and the back-flap, traditionally reserved for information about the author, is bare.

The photographs are disappointing both in composition and lack of biological activities portrayed (except that the 'high walk' is excellently shown on page 57) and have suffered from being reproduced on the same paper (very thick matt) as the text.

Guggisberg has included some extremely useful maps and a detailed bibliography of some 200 entries as well as a good Index. This is a book which deserves a wide readership and no one could leave the book without a great awakened interest in, and sympathy for, crocodiles. Though far from a definitive work on crocodiles, Guggisberg's book is a most useful and acceptable addition to the literature on the group.

H.R. BUSTARD.

17. RHODESIA. A Field Guide for Estimating the Overall Length of the Crocodile. by W.R. Thomson, J.Sn. ~~1971~~. Wildl. Mgmt. Assoc. 2(1):27

Summary: Two measurements of the hind foot, of sixteen crocodiles, varying in size from 20.4" to 120.3" were recorded and resulted in a 1:12 ratio; i.e. every inch of hindfoot represented one foot in overall length. (British Imperial Measurements). The technique was 1) to measure from the heel to the end of the longest toe, including the toe-nail and 2) the same measurement excluding the toe-nail.

18. "There are Crocs at the bottom of our garden." by Hazel Townsend: Afri. Wild Life. 26 no.3. 1972.

Editor's note: Young wild crocodiles C. niloticus caught some 19 years ago and kept in captivity, eventually laid eggs from which young were hatched. Actual laying was also witnessed.

19. CORRECTION: PROCEEDINGS OF THE MEETING: VOL: 32.

James Powell Jr. wishes to point out that there were a couple of errors in the resume of this meeting - as published in the Proceedings. These are as follows:-

"On page 18, I am said to advocate cropping of Alligator mississippiensis. To the contrary, on page 73, and again on page 79, I specifically state that I do not believe the alligator should be removed from the endangered species list just yet. Then, on page 22, I am supposed to favour captive breeding projects for C. rhombifer and C. moreleti. I made no such recommendations in either of my papers, and I don't remember making them orally at the meeting. My views on this matter are summed up in the final paragraph of my Animal Kingdom article on the Morelet's crocodile.

20. IRAN.

Wayne King reports that Fred Harrington of the Game and Fish Department, Box 1430, Teheran, Iran is conducting a census of the crocodiles in Iran. It should be interesting to see what his census shows since Iran is on the periphery of Crocodylus palustris distribution.

Tony Pooley

TONY POOLEY.
EDITOR